

Leila AARNIO
Serial No. 10/089,219
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REMARKS

The claim amendments and remarks presented herewith are intended to be responsive to the issues raised in the "final" Official Action dated January 21, 2004.

As an initial "housekeeping" matter, the Examiner will note that a formal Appeal Notice was filed on June 21, 2004 along with an appropriate time extension petition and fee so as to toll the time period running against this application. The filing of the Appeal Notice also provides the Examiner with additional time to consider the substance of the amendments and remarks presented herewith.

The only issues remaining to be resolved in this application are the Examiner's art-based rejections. Specifically, claims 1-5, 7, 9 and 13-14 attracted a rejection under 35 USC §103(a) as allegedly unpatentable over Ljungqvist et al in view of Mannings. The Puhl reference has been combined with Ljungqvist et al and Mannings to reject claims 6, 8 and 11 under 35 USC §103(a), while each of Giniger et al and O'Brien, Jr. has been combined with Ljungqvist et al and Mannings to reject claims 10 and 12, respectively. As will become evident from the following discussion, none of the applied references is appropriate against the claims pending herein.

According to the present invention, the questionnaire and possible optional answer alternatives are transferred *in a cellular radio system*. In this regard, the present application states [page 5, lines 22-26] that:

"The invention makes use of known cellular radio systems, such as the GSM (Global System for Mobile Communication) and data transmission protocols, such as the WAP, SMS (Short Message Service) or the HTTP (HyperText Transfer Protocol), wherefore their technical features are not explained in more detail here."

Clearly, the data transmission protocols disclosed in the subject application cannot be used in a public switched telephone network (PSTN) utilized in the publication of Ljungqvist.

The Ljungqvist publication discloses only a telecommunication network, namely a public switched telephone network (PSTN) [e.g. abstract, line 4; page 3, lines 7, 13, 27]. On page 9, line 28 there is mentioned “an intelligent network”, which means that a service logic for a call is located separately from the switching facilities, allowing services to be added or changed without having to redesign switching equipment. Thus, the solution suggested by Ljungqvist is still based on the traditional switching circuit. This is clearly stated also on page 12, lines 6-7 (“Another network 122, such as Internet, can be **coupled to the network 120** by means of an interface 121”). In other words, there are means for coupling other networks to the network 120 always used according to Ljungqvist.

Additionally the use of a PSTN in Ljungqvist is obvious and clearly detectable from the disclosed parts of a PSTN, such as a **switching node** [page 4, line 31; page 6, line 6; page 7, line 12; page 11, line 20; page 12, line 4; page 15, line 3; Claim 1: page 23, lines 17, 21-22; Claim 12: page 25, lines 15, 20; Claim 13: page 26, lines 5-6, 10; Claim 14: page 26, line 27] and a **control node** [page 4, line 21; page 6, line 5; page 7, line 11; page 11, line 26; page 12, line 5; page 15, line 2; Claim 1: page 23, lines 11, 17; Claim 12: page 25, line 14; Claim 13: page 26, line 4; Claim 14: page 26, line 24]. These switching and control nodes are part of the PSTN, and not present in a cellular radio system employed according to the present invention. Since Ljungqvist only discloses a PSTN, and a mobile telephone (referred as 104 in Fig. 1) is presented as an alternative to a telephone [e.g. page 3, line 31], it must be concluded that such alternatives are used in a similar manner, i.e. as ordinary fixed telephones in a PSTN. Furthermore, it should be noted that no other telecommunication networks are mentioned in Ljungqvist. On page 3, from line 31 on there is also determined other

possible devices with which the subscriber can communicate with the telecommunication network. But again the only disclosed network is PSTN, so the mentioned communication is undoubtedly realized within a PSTN, i.e. the device is capable of transmitting voice and/or signals, but no data packets as in the present invention.

Contrary to Ljungqvist, in the present application it is stated [page 4, lines 17-25] that:

“The present invention is based on the inventive idea that by realizing a questionnaire-based survey by utilizing an existing cellular radio system, the survey can be made easily and rapidly in a desired target group having terminal devices that function in a cellular radio system, without a need for a separate survey equipment. In particular, it has now been realized that the WAP used in a cellular radio system enables two-way data transmission between the researcher and the participant. Thus the questions and optional answer alternatives can be formulated with respect to the earlier answers of the participant and on the basis thereof.”

Further terminal devices are defined in the application [page 5, lines 12-16] as follows:

“The terminal device 1 can be for example a telephone, a PDA (personal digital assistant) or another device with means for making a data transmission connection between the terminal device and the central device, i.e. the terminal device can transmit and receive data transmission packets

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and has an individual identifier in order to identify said device."

Moreover, a central device is defined in the application [page 5, lines 16 - 22] as follows:

"The central device 2 means a device or a program that is capable of passively waiting for communication requests from one or several terminal devices and of transmitting the requested data transmission packets to those terminal devices that requested them. The central device can also be capable of making a data transmission connection to one or several terminal devices in order to transmit a data transmission packet to said terminal devices."

No such means are disclosed or even implied in Ljungqvist.

Although a mobile telephone can be used in Ljungqvist, a cellular radio network and data transmission connections for transmitting data transmission packets are not presented, or even implied. An ordinary voice phone service disclosed by Ljungqvist is a type of a circuit-switched network in which a physical path is obtained for and dedicated to a single connection between two end-points in the network for the duration of the connection. The telephone company reserves a specific physical path to the number phoned for the duration of the call. During that time, no one else can use the physical lines involved. In a packet-switched network as disclosed in the present application, a packet is the unit of data that is routed between an origin and a destination on the packet-switched network. Data to be sent are divided into packets of an efficient size for routing. Each of these packets is separately numbered and includes an address of the destination. The individual packets may travel different routes through the net. When they have all arrived, they are reassembled into the original data

entity. A packet-switching scheme is thus an efficient way to handle transmissions on a connectionless network. A circuit-switched scheme is used for networks allocated for voice connections. In circuit-switching, lines can be shared among many users as with packet-switching, but each connection requires the dedication of a particular path for the duration of the connection.

Ljungqvist illustrates only a known telephone call type of communication, which is established for (constant) interaction. During the established interaction, all questions or the like are presented to a subscriber, and after that the interaction is completed. Thus, the interaction is either on or off, and it is established (i.e. active) or completed (i.e. inactive). To the contrary, according to the present invention, there are transmitted data packets through allocated data transmission connections, and there are used individual identifiers for identifying and controlling the participation to the connection, which is not supposed to be a constant, interactive connection. Instead, the central device is capable of passively waiting for communication requests and answer messages corresponding to questionnaire.

As a way of communication, Ljungqvist only introduces a well-known ***calling*** function using a basic switched telephone network. This is evidenced by Ljungqvist's statement that: "Subscribers of the target group are ***called***" [page 4, lines 7-9; Claim 24: page 28, line 29]. Furthermore, Ljungqvist determines [page 4, lines 29-31]: "**The communication lines** are preferably established between the subscribers in question and the switching node." On the contrary, the present invention realizes a questionnaire-based survey by utilizing ***an existing cellular radio system***, in which ***data transmission packets*** are utilized for transmitting data according to the invention.

The use of only the common telephone network by Ljungqvist is also clearly seen from the fact, that the SMS-system has already been in use on the priority date of the publication of Ljungqvist, and the SMS is in no way referred by Ljungqvist, but is totally absent from the publication. Ljungqvist only utilizes a traditional public switched

telephone network (PSTN) and although mobile telephones (as referred in Fig. 1, 104) can be used in a PSTN, the mobile telephone is not used in a cellular network, but in a PSTN, as an ordinary fixed telephone device.

Mannings discloses a DECT cordless telephone [e.g. abstract, line 4]. The DECT (Digital Enhanced Cordless Telecommunications) is a digital, wireless telephone technology, which uses TDMA (time division multiple access) to transmit radio signals to phones, like GSM. GSM (Global System for Mobile Communication) is optimized for mobile travel over large areas, whereas DECT is designated for smaller area of users, such as in cities and corporate entities. The DECT devices are typically referred as **cordless devices** and those are not equal to **cellular devices** of the variety employed in the practice of the present invention. There are devices equipped for both GSM and DECT known as dual-mode phones. The need of dual-mode phones in order to cope with both of the mentioned systems makes it clear without a doubt that the equipment and techniques used between cordless and cellular devices are indeed technically quite different.

The Abstract of Mannings discloses [lines 12-14] that: "To vote, the users transmit DTMF tones using the keys of their telephone handsets, or speak into their handsets..." Similar ways for users to transmit are disclosed in column 6, lines 46-48, which goes on disclosing that a separate channel is provided between user and Computer/Telephony Interface, i.e. here again a **separate channel** is provided, whereas the invention is based on transmitting data packets.

The DTMF (dual tone multi frequency) is a signal to the phone company that is generated when a user presses an ordinary telephone's touch keys. These devices are also called "touchtone" phones (formerly a registered trademark of AT&T). Each key pressed generates 2 tones of specific frequencies (high and low). Thus, here also only the traditional voice connection or signalling according to key presses are disclosed as transmitting means. The Computer/Telephone Interface unit (4) [abstract, line 16] which

is disclosed in Mannings provides a way for a program to detect DTMF signals. Furthermore, as presented e.g. in Figs. 1 and 3, PSTN (8) is always used in the teaching of Mannings. Mannings therefore clearly does not disclose data transmission connections for transmitting data transmission packets.

The DTMF signals are again disclosed in column 3, line 7. In lines 44-49 there is said that for avoiding security problems, questions are presented and answered "on-line". Lines 55-56 determine that answers are given by pressing a key. In the next paragraph the interactivity is presented, which obviously is based on answers given by pressing a key in an on-line session. Thus, nothing relating to the present invention is presented.

Mannings determines used devices as "**standard DECT cordless telephones**", or similar devices with a **more limited functionality**" [column 4, lines 64-66] "**based on DECT technology**" [column 6, line 6], i.e. **cellular telephones** having more functionalities than a standard DECT cordless telephone are **not** disclosed.

Radio base stations are disclosed [column 4, line 67; column 6, line 8-10] and refer to local base stations connecting DECT cordless devices in certain limited area. This is clearly seen from the fact that these radio base stations are connected through a wireless Private Branch Exchange (WPBX) and the Public Switched Telephone Network (PSTN). A PBX is a telephone system within an enterprise that switches calls between enterprise users on local lines while allowing all users to share a certain number of external phone lines. The main purpose of a PBX is to save the cost of requiring a line for each user to the telephone company's central office. Mannings states [in column 6, lines 10-11]: "WPBX has sufficient capacity to handle **calls** simultaneously", wherein again only **calls** are disclosed -- no other kind of connections are mentioned. The PBX is owned and operated by the enterprise rather than the telephone company. Originally, PBX used analog technology, but today PBXs use digital technology, where digital signals are converted to analog for outside calls on the local loop using plain old

telephone service. A PBX includes a telephone trunk (multiple phone) lines that terminate at the PBX; a computer with memory, which manages the switching of the calls within the PBX and in and out of it; the network of lines within the PBX and usually a console or a switchboard for a human operator. As explained here, the PBX is a closed system for certain limited area and users. The solution presented by Mannings is therefore useful for implementing, for example, remote voting at certain public events.

Mannings determines [column 5, lines 15-17] that user inputs are made with voice or key presses. HTML-format and www-pages [in next paragraph] relate to later processing of received data (Fig. 2). In column 6, lines 29-35 there is mentioned that remote PSTN lines or cellular users may connect to the computer/telephony unit **by way of the PBX**, i.e. here also no other ways but those previously mentioned are disclosed. In column 6, lines 61-63, there is clearly disclosed that the answering unit and handset are in active contact as long as the voting operation is complete. This is not the case in the present invention utilizing packet-switched circuits. Column 7 goes on by disclosing again DTMF signal.

The citations to Puhl et al, Giniger et al and O'Brien, Jr. fail to cure the discrepancies of Ljungqvist and Mannings as discussed above.

To summarize, the solutions disclosed in the applied publications are based on technology used in a switched telephone network, and are not capable of being utilized in a cellular radio system, transmission of data by data transmission packets, nor the devices' ability to receive or transmit data transmission packets, i.e. there are functional, operational and environmental differences between cited publications and the present application, which lead to totally different technical solutions.

In view of what has been presented above and the amendments presented herewith, applicant is strongly in the opinion that the present invention is patentable in its present form over the applied publications of records.

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Early receipt of the Official Allowance Notice is therefore solicited.

Respectfully submitted,

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